

**ABSTRACT**

An array substrate for use in an X-ray sensing device includes a silicon insulator on a thin film transistor. The silicon insulator is silicon nitride or silicon oxide that has a strong adhesive strength to the active layer of the thin film transistor. Thereafter, an organic material, as a planarizing layer, is formed on the silicon insulator, so that the leakage current, which has a bad influence on the operation of the thin film transistor, can be prevented.